

The following species are found on the Andean summits from New Grenada to Peru or Bolivia :

- Ranunculus Peruvianus.
 Sisymbrium canescens.
 Cerastium Andinum.
 Arenaria alsinoides.
 Colobanthus Quitensis.
 Trifolium amabile.
 Alchemilla orbiculata.
 " Sibbaldiæfolia.
 " tripartita.
 " hirsuta.
 Acæna elongata.
 Ottoa ænanthoides.
 Tauschia nudicaulis.
 Lobelia nana.
 Halenia elata.
 Saracha umbellata.
 Mimulus glabratus.
 Veronica serpyllifolia.
 Alnus acuminata.
 " Jorullensis.
 Sisyrinchium scabrum.

—about ten per cent. of the entire flora. In view of the distance which separates the two regions—some 900 to 2400 miles—this is, after all, not such a small number ; indeed, the wonder is rather that so many alpine forms should have found it possible, in the region of the tropics, to cross the depression of the Isthmus of Panama.

Observations on the Chinantec Language of Mexico.

By Daniel G. Brinton, M.D.

(Read before the American Philosophical Society, January 15, 1892.)

Name.—The folk-name *Chinanteca*, plural of *chinantecatl*, is a word in the Nahuatl language meaning, "inhabitants of Chinantla," which latter signifies a spot enclosed by cane hedges or palisades. By extension, the common term for "village" was *chinamiltl*, as they were usually protected by such light defenses. The Chinantecs, therefore, as a nation, are known to us only by the name applied by their neighbors, the Aztecs, to their chief town.

The assertion of Orozco y Berra that they were also called *Tenez* arose from a misunderstanding of the letter of Hernando de Barrientos to Hernando Cortes (1521). Barrientos was not among the Chinantecs proper, but in another *chinamitl* in Chiapas.* Still other *Chinanteca* are mentioned as resident in Nicaragua. This Nahuatl word has absolutely no ethnographic significance.

Several authors have confounded these Chinanteca with the "Tzinacanteca," or Bat-people, a Maya tribe in Tabasco and Chiapas. The two are nowise related.

Location.—Their country was located in the mountains of the eastern portion of the State of Oaxaca and on the frontiers of the present State of Vera Cruz. Their neighbors on the north and east were Nahuatl-speaking tribes, on the south the Zapotecs and Mistecs, and on the west the Mazatecs and Cuicatecs, the latter supposed to be a distant branch of the Zapotec stock. Within these boundaries was a wide variety of climate, ranging from the torrid vales of the *tierra caliente* up to the chilly regions of the high sierra, where we find one of their villages with the significant name "Holy Mary amid the Snows," Santa Maria de las Nieves. The village of Chinantla itself is situated in a wild and mountainous district where the climate is cool and rainy.† Orozco y Berra gives the names of thirty-four other towns inhabited by them.

History.—The Chinantecs are an extremely ancient people who have resided on the spot where the Spaniards found them from the earliest period of the traditional history of Mexico. We first hear of them as having been conquered by Ahuitzotzin, ruler of Mexico. This event according to the chronology of Torquemada, who is our authority for it,‡ took place in the year 1488.

They were treated by their conquerors with the utmost severity and cruelty, of which the historian Herrera cites several instances.§ They were glad, therefore, on the appearance of the Spaniards to throw off the yoke of the Mexicans and lend their aid to the invading strangers.

Culture.—The Chinantecs are described as a rude savage people, living in huts constructed of branches of trees, and devoid of the culture of their neighbors on either hand, the Zapotecs or the

* See the letter of Barrientos in the *Cartas y Relaciones de Hernando Cortes*. Edition of Don Pedro de Gayangos, Paris, 1866, pp. 204, 205 and notes.

† E. Mühlensfordt, *Mexiko*, Bd. ii, s. 214.

‡ Juan de Torquemada, *Monarquía Indiana*, Lib. ii, cap. lxxlii.

§ *Historia de las Indias*, Dec. iii, Lib. iii, cap. xv.

Nahuas. Their principal weapon is said to have been lances of unusual length which they handled with singular dexterity.

Literature.—The first to reduce the Chinantec language to writing was Brother Francisco Saravia. He was a native of Seville, in Spain; by trade a cabinetmaker, in that capacity he emigrated to the City of Mexico, where he married and carried on a prosperous business. The death of his wife, when he was about thirty-five years of age, led him to renounce the world, and in 1574 he joined the order of Dominicans. Having been assigned to the province of Oaxaca, he devoted himself to studying the language of the Chinantecs, and in collecting them from the caves and ravines in which they lived into villages where they could cultivate the soil. His success was great, and the natives regarded him with equal love and reverence. For fifty years of his long life he labored among them, and when he died in 1630, at the ripe age of a nonagenarian, he left in the archives of his order a number of MSS. in and upon the language. Of these we have the titles of a *Catecismo*, an *Arte*, a *Confesionario* and *Sermones*. Probably the most important was his *Gran Homilario Chinanteco*, a copy of which he placed in every one of the parishes under his care, so that the native sacristan could read the homily when the priest should be prevented from attending. More interesting to the historian doubtless was his autobiographical sketch of the tribe written under the title *Noticia de la Conversion de la Nacion Chinanteca y sucesos acaecidos en ella al Autor*.

I do not know of a single copy of any of Saravia's writings; and what is more remarkable, Father Nicholas de la Barrera, who precisely one hundred years after Saravia's death printed in Mexico the only known book in the language, had never even heard of his predecessor's labors, and states specifically in his Prologue that he had not found so much as a word written or printed in this tongue.

Barrera himself is said to have been a native of Oaxaca, and began his missionary work among the Chinantecs about 1708. For a score of years he had been cura of San Pedro de Yolos, when his book appeared—*Doctrina Christiana en Lengua Chinanteca* (4to, Mexico, 1730). Of this only two copies are known to be extant, from one of which I possess a careful MS. copy by the hand of the late Dr. C. Hermann Berendt. This learned Americanist had commenced a study of the tongue, and left a few notes

upon it, which have also been of some service to me, although they are quite fragmentary.

The tongue is not included in Pimentel's *Cuadro Descriptivo de las Lenguas Indigenas de Mexico*, and there is no specimen of it accessible to students of linguistics. It appears, therefore, worth while to present a short description of its character; the more so as this seems different from many American tongues on account of the singular simplicity of its construction. In fact, I entertain some doubts whether Barreda's version represents correctly the idiom in its pure form. It certainly reveals no such difficulties as he speaks of, and resembles strongly a jargon in which inflections and syntactic relations have been reduced to their lowest terms. Several of the translations of the early missionaries have proved, on examination, to be in a jargon or trade language of a tribe, and not in its real speech. This may be the case here.

The Language.—The Chinantec tongue appears to have no affinity with any of its neighbors. It is described as guttural, rough in enunciation and difficult to learn. Barreda says in his Prologue that many of the priests assigned to parishes in the nation tried in vain to acquire it, and, failing in this, attempted to introduce the Nahuatl among the Chinantecs; and that this proving a failure, had asked for other fields of labor. He himself, after twenty years of study, had succeeded but moderately in mastering it, but adds that he had exercised the utmost care in translating the *Doctrina*, submitting every word in it to the most intelligent natives of his parish. The dialect he employed was that of Yolos, which differed, but not greatly, from that of other portions of the nation.

The pronouns are but slightly developed—a fact in marked contrast to most American tongues. The same form serves for both the personal and the possessive pronouns, and it is probable that there is no distinction between their singular and plural number, although a slight difference is sometimes indicated.

PRONOMINAL FORMS—PERSONAL AND POSSESSIVE.

I,	<i>na.</i>	We,	<i>nah.</i>
Thou,	<i>no.</i>	You,	<i>no.</i>
He,	<i>quia.</i>	They,	<i>quiaha.</i>

It is noteworthy that the pronoun of the third person, *quia*, may be used for either the second or the first in its possessive sense; thus,

vi chaaqui quia, "for his sins," instead of *vi chaaqui na*, as a translation of "for my sins." So again, *animas quia*, as a translation of "our souls." This is analogous to the language of children, who do not clearly distinguish persons, and often refer to themselves in forms of the third person instead of the first.

The interrogative is *he*, which also serves as a relative, and with the addition of the adverb of place, *la*, here, forms the demonstrative, *hela*, this, as *hela cna in*, "this first one." The demonstrative "that" is usually given by *da* or *nda*.

The indefinite pronoun *cha*, some, some one, somebody, is frequently prefixed, often apparently in a collective or distinctive sense, as *chañuh*, "some man" or men, *i. e.*, people in general; *charuhno*, "thy neighbor;" *chazaquiun*, "somebody bad"—the devil; *chajhian*, "somebody else."

In all cases the possessive pronouns are suffixed to the nouns.

The verbal forms appear to vary considerably. A terminal *e* or *a* appears to mark the infinitive, as *páne*, to chastise; *ngueihna*, to kill. The imperative is characterized by the pronoun, as

Phua ha cala phua na.
Say thou as say I.

The reflexive has the pronoun before and after the verb:

Na juanih na.
Me bow I.
(I bow myself.)

The interrogative form is thus:

Cale cuihno ñuh quiaha?
Didst know thou mau her?
(Didst thou know her husband?)

Cu.cuim-ba-na.
I did know him.

In these sentences *ca* is the sign of the preterit, as again in the following sentence:

Ma ca-mea testamento ñuh u?
Did thy father make a will?

Where the present form of the verb is *mea*, to make.

PREPOSITIONS.

The prepositions are properly such, being prefixed to the nouns, and separated from them.

In, *no*; as, *no toho*, "in the belly;" *no caliz*, "in the calix" (sacred cup); *no chaaqui*, "in sin."

On, *ni*; as, *ni altar*, "on the altar;" *ni muicui la*, "on this world."

Into, *lei*; as *hiñi lei gotan tan vino lei muian*, "(the) bread into flesh and (the) wine into blood."

Before, in the presence of, *quiani*; as *quiani jhian quecha*, "before other persons." Before, in time, *gean*.

After, in time, *quéin*.

CONJUNCTIONS.

And, *tan*.

Also, *jalabajna*; as, *jalabajna na ñina*, "also I am poor."

NUMERALS.

	<i>Cardinals.</i>	<i>Ordinals.</i>
1	<i>cna</i> ,	<i>hela cna in.</i>
2	<i>tno</i> ,	<i>hela tno in.</i>
3	<i>nne, nei</i> ,	<i>hela nne in.</i>
4	<i>quiu</i> ,	<i>hela quiu in.</i>
5	<i>ña</i> ,	<i>hela ña in.</i>
6	<i>ñiu</i> ,	<i>hela ñiu in.</i>
7	<i>nyaa</i> ,	<i>hela nyaa in.</i>
8	<i>ñna</i> ,	<i>hela ñna in.</i>
9	<i>ñu</i> ,	<i>hela ñu in.</i>
10	<i>nya</i> ,	<i>helu nya in.</i>
20	<i>nyanya</i> .	
40	<i>tno laa</i> .	
50	<i>tno laa nya</i> .	
60	<i>nne la</i> .	
70	<i>nne la nya</i> .	
80	<i>quiu la</i> .	
100	<i>ña la</i> .	
200	<i>nya la</i> .	

TEXTS.

The Lord's Prayer.

Phui ñuhu nah ñujui quinno, qualin cuiú hela xi-no; quæhe
 Lord father our heaven it in, may blessed that name-thy; come
nah ñujui quiehe; quali heli hahà muycuila, jalabajna ñujui; quæhe
 us heaven thy; may that will earth on, also heaven; give
hi nah chaháchahá, tan ih-no chaaqui quiee nah, can jhiala in nah
 bread us all the time, and wilt-thou sins forgive us, just as we

chazaquiun quiani nah; tan za ton-no nah qûehi vi chaahui; qui mi nah
sins pardon against us; and not thou us bring to sin; take us
phui Dios geila he zaquiun.
Lord God all this evil from.

EXTRACT FROM THE DOCTRINA OF BARREDA.

- Porque se hizo hombre el hijo de Dios? He ví caleñuhne Jna Dios?
- Por librarnos de los manos del Demonio, y por redimir nos del pecado. Vi caquinne nah quaaaha lin, tan vi caquinne nah ni chaa qui.
- Que hizo Nuestro Señor Jesu-Christo para librarnos? He camea phui nah Jesu Christo, vi caquinne nah?
- Padeció muchos tormentos, fué crucificado, murió y fué sepultado. Cangñinne ñile Juahui, cajanqua ni cruce, cajone, can cahanne.
- Que hizo nuestro Señor Jesu-Christo despues que murió? He camea phuinah Jesu Christo, qua male jonne?
- Al tercero día despues que murió, resuscitó, y á las quarenta días despues que resuscitó subió á los cielos y se sentó á la mano diestra de Dios padre todo poderoso. Nne mui qua male jonne, cagnihi, tan tno la mui qua male cagnihi cangaa na ñujui, tan caluinaà quaa cha Dios mii geilaha li mea.
- Viendrá otra vez nuestro Señor Jesu-Christo á este mundo? Nijhea que tno phui nah Jesu Christo, mui cuila?
- Otra vez hà de venir quando se acabe el mundo, á tomar cuenta á todos los vivos y muertos para darles el cielo para siempre á todos los que guardaron bien sus mandamientos; y á los que no los guardaron bien, les dará para siempre penas en el infierno. Cna que, nijhea mui cha in mui cui, jhea quià quenta geilan cha xan, tan cha jon, cha queh ñujui geila muiba geilan cha ca hah quiu mandamiento quiaha; tan li chaza calah quiu, queh geila muiba juahui nya jui.
- Como murió nuestro Señor Jesu Christo? Ihiala cajonne phui nah Jesu Christo?
- Murió como hombre; no murió como Dios; porque Dios no puede morir. Cajonne calan cha, aza cajonne calan Dios, chavi Dios aza li jonne.
- Si Dios no puede morir, como murió nuestro Señor Jesu Christo? Ze Dios aza li jonne, ihiala ca jonne phui nah Jesu Christo?
- Aunque nuestro Señor Jesu Christo era Dios, era tambien hombre, y así pudo morir como hombre, y no pudo como Dios; porque Dios nunca puede morir. Gui cu jua phui nah Jesu Christo yha Dios, ja hala jua yba ñuhne; vihe jna le jonne calan chañu, tan aza li jonne calan Dios; chavi Dios aza li jonne jua lei que.

Quando muere la gente en este mundo, tambien mueron sus almas?

No mueron sus almas, sinó solamente el cuerpo muere; porque no puede morir el alma.

Y cuando muere el cuerpo, muere para siempre?

No puede morir para siempre, porque el dia que se acabe el mundo, resuscitaran todos los cuerpos, y se juntaron con sus almas, ya para nunca mas morir.

Adonde van las animas de los defuntos quando mueren sus cuerpos?

Las animas de los buenos van al cielo para siempre, porque guardaron bien lo que manda la ley de Dios; y las almas de los malos van al infierno, porque no guardaron bien lo que manda la ley de Dios.

* * * * *

Que es cielo?

Cielo es un lugar lleno de mucho y grande gloria; lleno de todo genero de bienes, y de todo genero de alegria, en donde está Dios nuestro Señor, la Santissima Virgen, todos los Angeles y todos los Santos. Allí van las almas de los buenos que sirvieron à Dios à descansar para siempre, que nunca se podrá acabar.

Ma jonnencha muicuila, jabala jna jon anima quiaha?

Aza jon anima quiaha, ma jna la ha gotamba jonne; vi aza li jon anima.

Tan ma jonne gotan, jonne cnaphue?

Aza li jonne cnaphue geila muiba, vi quiaha mui cha in muicui, jna tno nigni cala geila gotan, tan nigni cnaha animas quiaha, vi aza jua cna li jonne.

Jhia cha animas cha jon ma jonne gotan quiaha?

Animas chaqui vn cha ñu jui geila muiba, chavi hah quiu he quiu hu tà ju quiaha Dios; tan animas cha zaquiun cha nya jui, chavi za hah quiu he quiu hutà ju quiaha Dios.

He ñu jui?

Nujui cna namba, canlè ñu phueli gloria, canlè cala geila juayanchij, thia nhuiaa phui nah Dios, xa ñujui, geilan angeles, tan geilan santos. Nda cha animas chaquiun, cha camea ta quiaha Dios, ma hine cala geila muiba, aza jua li chan.

ENGLISH-CHINANTEC VOCABULARY.

Alive, *chazan*.

All, *geila, geilan, lagei; geila hejna*,
"all these things;" *geila balimea*,
"all-powerful."

And, conj., *tan*.

Bad, *azuquiù, zaquiù, chaquiù* (= not good).

Because, *chavi*.

Believe, to, *changa*.

Belly, *toho*; "in the belly of the virgin," ño *toho xa muinne*.

Bird, *ta*.

Blood, *muian, muien*; "by the blood," *muien no* (*mui* = water and woman).

Body, *gotan*; "in body and soul," *gotan tan anima quiaha*.

Boy, *quana*.

- Bread, *hiñi*.
 Breast, *chij*.
 Brother, *run*.
 Child, *yun*.
 Day, *muiba*.
 Dead, *ma-jon, cha-jon*.
 Devil, *zaquiun* (see "bad"); *chalin*
 (see "sick").
 Die, to, *jon-ne*.
 Drink, to, *nguhu*.
 Ear, (*la*)*quaha*.
 Earth, *muycui*.
 Eat, to, *cuhu*.
 Eye, *manihí*.
 False, a lie, *azacha* (= not true).
 Father, *ñuh* (= man); *mii*; *Dios mii*,
 "God the Father."
 Fire, *gêi*.
 Foot, *tehi*.
 Full, *canlé*.
 Girl, *mui yun* (= female child).
 Give, to, *quæ, quæ he*.
 Good, *quiu*.
 Grandfather, *nyuh*.
 Grandmother, *nyaa*.
 Great, *phue*; superlative, *ñu phueli*.
 Hand, *quaha*; "open thy hands,"
janquaha! "In thy hands I
 place my soul," *nquaha na*
animaquia.
 Head, *gui*; "throw water on the
 head of the child," *yaha mui ni*
gui yun.
 Heart, *haha*.
 Heaven, *ñujui, nahui*.
 Hell, *nyujui*.
 Herb, *ha*.
 House, *nu*.
 How, *jhíula, cala*; how long, *ju*
muí.
 Husband, *ñuquia* (= consecrated
 man, i. e., by the Church).
 If, *ze*.
 Infant, *chimina*.
 Join, to, *can* (= to marry).
 Know, to (saber), *ñih*.
 Know, to (conocer), *cuih*.
 Kill, to, *ngucihua*.
 Live, to, *xan*.
 Magician, *gin*.
 Make, to (Span. hacer), *mea*.
 Man, *ñuh, cha-nu*.
 Meat, flesh, *gno*.
 Money, *cu*.
 Month, *zei*.
 Moon, *zei*.
 Mother, *xa, xaha*.
 Mountain, hill, *maa*.
 Much, *ñu, ñule*.
 Name, *xi*; *hi xi no?* "What (is)
 thy name?"
 Nephew, niece, *nyaa*.
 No, *aza, za*.
 Nothing, *aza-he*.
 Now, *na*.
 Or, *qua*.
 Pay, to, *qui-hi, quei*.
 Place, *namba*.
 Poor, *ñin, ñina*.
 Pudenda feminae, *yuh*.
 Pudenda viri, *cnu*.
 Relation, a, *ruh, run* (= brother).
 Shoulder, *câ*.
 Sick, *chah*.
 Sin, *chaaqui*.
 Small, little, *mihá*.
 Son, *jna*.
 Soon, *naba*.
 Speak, to, *phua*.
 Steal, to, *êehi*.
 Stick, wood, *ma*.
 Stone, *cnu*.
 Sun, *mañui*.
 Tears, *mui nii* (= water, eyes).
 Town, *jui*.
 True, *cha*.
 Uncle, aunt, *heaya*.
 Virgin, *muinne* (v. woman).
 Water, *mui*.
 When, *ma*.
 Where, *jhia*.
 Wife, *muiquia* (see "husband").

With, <i>enaha</i> .	Work, <i>to, ta</i> .
Wizard, <i>lan</i> .	Year, <i>gni</i> .
Woman, <i>mui, cha-mui</i> .	Yes, <i>xa, jna, ma</i> (<i>iba</i> = it is).
Word, <i>ju; ena ju</i> , "one word"	

On the Mazatec Language of Mexico and its Affinities.

By Daniel G. Brinton, M. D.

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In the northeastern corner of the State of Oaxaca lies a mountainous tract, watered by numerous streams, known from earliest times by its Aztec name *Teutilan*, the Divine Land, or The Land of the Gods, and officially now as the district Teutilan del Camino. It has about 26,000 inhabitants, a large proportion of whom are of native blood. These speak three radically different languages—the Cuicatec, which is probably a dialect of the Zapotecan stock; the Chinantec, which stands alone, and the Mazatec, of which nothing whatever has been known, and which it is my aim to examine and, if possible, classify in the present study.

The material I have for the purpose is an unpublished vocabulary, collected by a Danish officer, who was in the service of Maximilian, and which has been obligingly furnished me by Mr. Alphonse Pinart, whose extensive researches in American linguistics are well known. The only published materials in existence are two translations of the Lord's Prayer into different dialects of the tongue. These have been reprinted by Pimentel, Bancroft and other writers. Their precise provenance is unknown; as for the vocabulary, it was obtained at Huantla, northeast of the town of Teutilan.

Names.—The name Mazatecatl—plural, Mazateca—means "Deer People" in the Aztec or Nahuatl language. It may have been given them by their Nahuatl neighbors on account of their land abounding in deer; or, as some say, because they worshiped the figure of a deer—that is, had a deer totem among them. There were other Mazatecas living in the present State of Tabasco, and yet others in the State of Guerrero; but we have no reason to suppose that those "Deer Peoples" were at all related to these in Teutilan. What they called themselves, if they had a collective tribal name, we do not know.